

IN THE CLAIMS:

Please amend claim 4 pursuant to 37 C.F.R. 1.121 as follows (see the accompanying "marked up" version pursuant to 1.121):

21 4. (Twice Amended) A method for preparing a novel immuno-stimulating polysaccharide substance, comprising the steps of

culturing *Phellinus linteus* Yoo deposited under the accession number KCTC 0399BP on media containing glucose, yeast extract and peptone to give mycelia or fruiting bodies at 28°C for about 5 days;

extracting the substance from the mycelia or fruiting bodies by hot water;

isolating the substance by precipitating in ethanol at 4°C for about 24 hours, suspending in water and dialyzing with a dialysis tube at 10°C for about 72 hours; and

subjecting the substance to DEAE cellulose chromatography and gel chromatography to purify the substance;

and recovering the purified substance.

Please add claim 9 as follows:

6- 9. (New) A method according to claim 4 wherein the DEAE-cellulose chromatography comprises using a flow rate of about 5 mL/mm and eluting the polysaccharide by applying a concentration gradient from 0 to 1M NaCl.

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Docket No: 1728/1F088

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PATENT TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Ick-Dong Yoo et al.

Serial No.: 09/846,634

Art Unit: 1651

Confirmation No.: 5673

Filed: MAY 1, 2001

Examiner: Vera Afremova

For: NOVEL IMMUNO-STIMULATING POLYSACCHARIDE SUBSTANCE FROM
PHELLINUS SPP. STRAIN AND USE THEREOF

PENDING CLAIMS

Hon. Commissioner of
Patents and Trademarks
Washington, DC 20231

August 8, 2002

Sir:

4. (Twice Amended) A method for preparing a novel immuno-stimulating polysaccharide substance, comprising the steps of

culturing *Phellinus linteus* Yoo deposited under the accession number KCTC 0399BP on media containing glucose, yeast extract and peptone to give mycelia

or fruiting bodies at 28°C for about 5 days;

extracting the substance from the mycelia or fruiting bodies by hot water;

isolating the substance by precipitating in ethanol at 4°C for about 24 hours, suspending in water and dialyzing with a dialysis tube at 10°C for about 72 hours; and

subjecting the substance to DEAE cellulose chromatography and gel chromatography to purify the substance;

and recovering the purified substance.

8. (Amended) A novel polysaccharide comprising glucose units which are joined by $\alpha(1\rightarrow4)$ and $\beta(1\rightarrow6)$ linkages to form a long chain and mannose and galactose were bonded as branches to the long chain, which is produced by a method comprising the steps of

culturing *Phellinus linteus* Yoo deposited under the accession number KCTC 0399BP on media containing glucose, yeast extract and peptone at 28°C for 5 days with aeration of 2vvm and rotation of 160 rpm to give mycelia or fruiting bodies;

extracting the substance from the mycelia or fruiting bodies by hot water;

isolating the substance by precipitating in ethanol 4°C for 24

hours, suspending in water, dialyzing at 10°C for 72 hours with a dialysis

tube while refreshing every 12 hours and freeze -drying the solution in the dialysis tube to give a crude extract;

purifying the crude extract, dissolved in 5mM sodium phosphate buffer in pH 7.2, by eluting in a DEAE-cellulose column at the speed of 5mL/min with a solution of NaCl in the buffer having a concentration gradient from 0 to 1M as an eluting buffer to give eluted fractions, and

further purifying the eluted fractions by eluting in gel column to give pure immuno-stimulating substance.

9. (New) A method according to claim 4 wherein the DEAE-cellulose chromatography comprises using a flow rate of about 5 mL/min and eluting the polysaccharide by applying a concentration gradient from 0 to 1M NaCl.